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State of Utah
DEPARTMENT OF NATURAL RESOURCES
Division of Oil, Gas & Mining

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October 15, 2007

David Taylor
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400 South 200 East
P. O. Box 76
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Subject: Fifth Review of Notice of Intention to Commence Large Mining Operations, Miracle Rock Mining and Research, The Rockland Mine, M0150040, Task 1830, Emery County, Utah

Dear Mr. Taylor:

The Division has completed a review of your May 23, 2007, submittal of a reclamation plan for The Rockland Mine. The submittal only references regulation R647-4-110 Reclamation Plan, but because the reclamation plan is integral to other aspects of the plan, some of these other requirements are also addressed.

The Division needs to have one consolidated plan, and the formats of the current and past submittals do not match. When you respond to the enclosed review, it should be in one complete document. The Division requests that submittals be three-hole punched, maps folded and placed in plastic 8½ by 11 sleeves, and binders provided for proposals of 30 pages or more (binders need only be provided once). Applications should not be bound.

We encourage you or your consultant to contact the Division to arrange a meeting to discuss this review. Approval of the plan is required to fully abate cessation order MC2006-03-08-01. The submittal and review process has been continuing now for over five years, and there are still many deficiencies that need to be addressed.

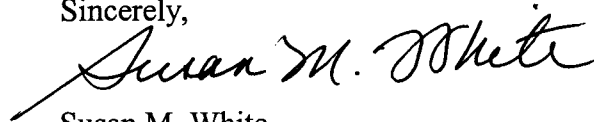
The time frame in the cessation order for gaining approval of the plan has now lapsed, and you should immediately request the additional time needed to respond to this review.

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By November 30, 2007, please submit additional surety to bring the total to \$107,500.00. This is the amount that has been calculated based on the information provided in the plan. The amount of your existing surety, \$30,000.00, was based strictly on a rate of \$5000.00 per acre for the disturbance that existed at the time. Please contact the Division's bonding coordinator, Jed Pearson, (801) 538-5382 for information about submitting the additional surety and modifying the reclamation contract.

If you have any questions in this regard please contact me, Tom Munson, Paul Baker, or Beth Ericksen of the Minerals Staff. Thank you for your cooperation in completing this permitting action.

Sincerely,

A handwritten signature in black ink that reads "Susan M. White". The signature is fluid and cursive, with a long horizontal line extending from the left side of the name.

Susan M. White
Mining Program Coordinator
Minerals Regulatory Program

FIFTH REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Miracle Rock Mining and Research.
The Rockland Mine
M0150040
October 15, 2007

GENERAL COMMENTS

The Division requests that you number the pages of the submittal in Section R647-4-110 Reclamation Plan and provide a table of contents as part of the submittal. (BE)

R647-4-105 - Maps, Drawings & Photographs

- 105.1 Topographic base map, boundaries, pre-act disturbance
The map titled, "Rockland Mine Site", indicates there are a total of three sheets. (One note on the drawing says, "The centerline information on the mining done to date is on a separate drawing [sheet 2 of 3]".) The Division can only locate sheet one. The access road on this map is not labeled as access road. If the road has a specific name, please identify it. The map text indicates there is 4.178 acres disturbed, but this appears to exclude the pad outslope. The map should show the entire disturbed area and the acreage of this area. The map shows several areas: Topsoil storage, refuge stockpile, overburden stockpile, among others. Within these identified areas, please show the area dimensions of each. (BE and PBB)

The map titled, "Rockland Mine Site" does not have any topographic lines showing elevations, contour intervals etc. This information must be included. (BE)

The impoundment must be shown on the map. The words "Run off pond" appears on the map titled, "Rockland Mine Site," but there is no drawing with the dimensions. This information must be included on the map. (BE)

The same map must show route from the impoundment to the natural drainage. The natural drainage must be shown as well. Is this the same drainage that is described in 110.2.6; 20 feet in length? How does this route and natural drainage interplay with the "future disturbance area"? (BE)

The "Rockland Mine Site" map does not show where waste material will be temporarily located. If waste material is not temporarily located onsite for future removal, then indicate that information in the text. (BE)

The "Rockland Mine Site" map, which the text refers to as 105.1E, does not show the location of the portals located on the north side of the facility area. The text indicates the map identifies their location, however, they can't be directly located. They are labeled on

figure 105.2-A, however detail is lacking. They must be shown on the "Rockland Mine Site" map and on the reclamation facilities map. (BE)

Map 105.1, Map Site Location Map, is too general it does not provide the necessary detail for ephemeral streams, springs etc. More detail pertinent to the location is required. Drainage and erosion systems cannot be designed and developed without detail. (BE)

There are four squares shown on Map 105.1, are each of the squares on state lands? The map text is unclear. Please be specific and provide necessary information regarding which or all of these areas is state lands. (BE)

Map 105.1 must have the appropriate labels for access roads to the site. Since there is no legend, it is assumed the black lines are roads. What roads are they? They must be labeled. (BE)

There is indication of the existence of maps 105.D and 105E. The Division does not have these maps. Please submit. (BE)

105.2 Surface facilities map

The disturbed area outline of the map labeled 105.1E 105.2 does not include the water treatment pond. Please redraw the line to include this area. (PBB)

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)

If the plan for blasting the top portion of the highwall is retained (see Section 110.2 of this review), the plan needs to contain a geologic cross section of the highwall area. (BE & PBB)

A stockpile is described in the text, but it is not shown on the map titled Rockland Mine Site. The text refers to it as a subsoil pile. Please be consistent in terminology and labeling. Show the 'subsoil pile' on the map. In addition, provide a more detailed drawing showing the acidic material within the pile, and show the subsoil that will not be used in reclamation on the drawing. (BE)

Submit a reclamation treatment map that includes the reclamation topography. The submitted text indicates the reclamation information is on map 105.2. The Division does not have a copy of 105.2. The Division has 105.2-A and 105.1E 105.2, and map 105.1. Ensure the reclamation treatments are identified, labeled, and distinct from one another. Please ensure the reclamation acreage is shown and identified. (BE)

On the reclamation treatments map include the topography after reclamation of the treatments pond. (BE)

Show erosion and run off control features on the reclamation treatments map. (BE)

On the reclamation treatments map show the final slopes within the natural topography. (BE)

R647-4-106 - Operation Plan

- 106.2 Type of operations conducted, mining method, processing etc.
Where is the stockpile area for the shale? Please explain in the narrative and show on a map. The narrative should include the dimensions and volume of the stockpile. (BE)
- Please explain how the stockpiles will be managed for erosion and run-off purposes. Address any stockpiles that are acidic, provide dimensions of the stockpile. Include specific stormwater runoff plans for these piles. (BE)
- 106.5 Existing soil types, location, amount
The plan says one inch of topsoil and six inches of subsoil will be spread over the site. Total topsoil and subsoil volumes have been provided as well as anticipated. However, to ensure the identified volumes are appropriate for 7-acre total area coverage at these specified depths, please calculate the volume required to achieve the specified coverages of the topsoil and subsoil over the entire area that will receive subsoil and topsoil. (BE)
- 106.7 Existing vegetation - species and amount
The following comment was in the previous review and still applies since this portion of the plan was not changed:
Please correct the vegetation ground cover percentage on page 9, Section 106.7. This value should be broken into two components, understory and canopy. The understory value is 2.8 percent, and the canopy value is 24.25 percent. The success standard is 18.9 percent. Please make the appropriate corrections. (PBB)
- 106.9 Location & size of ore, waste, tailings, ponds
The operator has provided a description of this pond's dimensions but failed to provide the exact location in reference to the disturbed area, showing it outside of the permit area on Figure 105.2. Please provide a figure showing the disturbed drainage conveyance system and how drainage will reach this structure. The plan also needs to show watersheds, areas both on and off site, contributing to the site. (TM)

R647-4-107 - Operation Practices

- 107.3 Erosion control & sediment control
Please show how erosion is minimized and sediment is kept from leaving the site. It is not apparent how the drainage is routed to the pond; please describe this process as it exists. This needs to be shown on a map showing topography and disturbed boundaries so one see the adequacy of the treatment. (TM)
- You are also required to obtain and fill out the UPDES General Construction Storm Water Permit at <http://www.waterquality.utah.gov/UPDES/stormwatercon.htm> which will include a Stormwater Pollution Prevention Plan (SWPPP). This is not a requirement of the R647 rules but is a requirement of the Division of Water Quality. (TM & PBB)

R647-4-109 - Impact Assessment

- 109.1 Impacts to surface & groundwater systems

The plan does not fully explain the potential impacts to surface and ground water. The site is in close proximity to some mines that have documented large quantities of groundwater encountered in drilling or mining of coal. Please provide a geologic description of the humate resource, the dip of the beds, and the depth to which you intend to mine and the potential to encounter groundwater. Please provide these designs and mining related details. (TM)

109.4 Slope stability, erosion control, air quality, safety

The statement in the narrative is inadequate regarding erosion control, slope stability, air quality, and safety. There are existing highwalls in the area, and their management must be addressed regarding all of the above. What are the current/mining slope angles? (BE)

Run off and erosion control must be addressed. How will topsoil stockpiles and dump area erosion be controlled? (BE)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Please include a narrative or designs showing how erosion will be minimized on roads being used during reclamation. No blocking or restrictions that impede drainage or adversely affects the road should occur. (BE)

It is expected the access road is going to be revegetated. All disturbed mining areas, including roads, must be revegetated unless a variance is requested. Please elaborate. (BE)

The narrative indicates the highwall will be reclaimed to the extent possible, but please include a commitment to reclaim highwalls in accordance with the reclamation practices in R647-4-111.7. Please also include a scale on the cross sections. (PBB & BE)

According to the plan, highwalls will be backfilled with material to 3v:1h or 1v:1h slopes, and the remaining sandstone cliff will be blasted to create a rubble slope and completely eliminate the highwalls. The Division recommends against blasting the sandstone cliff tops. These cliffs are a natural part of the area topography, and they could be left. (PBB & BE)

If the highwall is to be blasted, the plan should show how this would be done. Consider a selective blasting plan for the top of the highwall face that includes management of explosive materials. In your consideration of the selective blasting plan, a plan and profile view of the drill pattern including hole diameter, hole depth, hole angle, overburden depth, and drill inclination angle(s) are typical. Estimate the volume of material that will be blasted. What is the estimated size range of the boulders that will result from blasting? Indicate that benchmarks, control points, lines and grades will be made as necessary for controlled blasting of the highwall area. Please include in the narrative that all blasting work will be performed in accordance with MSHA regulations and any other applicable local, state or federal safety standards. Indicate that appropriate permits will be obtained as required. (BE)

The narrative indicates that toxic and/or acid-forming materials will be buried. Please quantify these materials and show where they will be placed and how deeply they will be covered. (BE & PBB)

Please include a commitment to reclaim the sediment pond. (BE & PB)

The text indicates gouging techniques will be used as a means of erosion control. Further information is required such as depth and dimension of gouges, distribution, and pattern. This erosion control technique will be used throughout the entire area? If not, show locations of where this technique will be used on the reclamation treatments map (expected future submittal). Are there slope angle limits at which this approach will not be used? Consideration can be given to using dozer basins on steeper slope areas to harvest water. (BE)

If waste materials are stored on site, describe their location and size of the storage area. There is a comment that all waste material will be transported off-site, but another comment indicates that deleterious/waste materials may be used as fill. These comments must complement each other; therefore, text clarification is required. Provide a table listing the deleterious and waste materials (they may be the same) and estimated quantities. (BE)

For bond estimation purposes, the Division needs further information about the plan for sealing the portals. Please provide the thickness and height of concrete block seal, base grade % of the entrance area to the concrete block seal, and the distance from the outside entrance to the concrete block seal. (BE & PBB)

What is the overall slope distance from the top of the highwall area to the base of the slope? The typical cross section figure shows a reclamation contour in green. The area where the reclamation contour line and the existing contour meet and beyond is greater than 3H:1V. (BE)

The text indicates that 20-feet x 1-foot area in a subsoil pile will not be used as reclamation subsoil. There is indication the material will be placed at the base of the highwall and buried. Provide more detail in terms of the expected depth of the acidic subsoil that will be placed and indicate if the material will be distributed throughout the entire highwall area, or just a portion of the area. If it is a portion, provide information about specifically where. (BE)

Upon performing field tests the narrative indicates that if acid-materials are discovered they will not be used as top cover. Please indicate what and specifically where these materials will be used for in this event, or how they will be disposed of. (BE)

110.5 Revegetation planting program

Please modify the plan for roughening the surface. There is only enough subsoil to cover the surface six inches deep, and the site will be covered with only about one inch of topsoil. After spreading subsoil and topsoil, the area would be gouged with a trackhoe.

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Although this is a very good method for roughening the surface, the gouges will mix the subsoil and topsoil to the point that these soils have little benefit. The Division recommends either ripping instead of gouging or applying the soil after the site is gouged. (PBB)

Please specify the seeding method. The Division recommends broadcast seeding. (PBB)

R647-4-111 - Reclamation Practices

Please include a commitment to comply with the reclamation practices requirements with full elaboration on each of the practices. (PBB & BE)

R647-4-113 - Surety

Based on the information available, the surety is determined to be \$107,500.00. This amount may be adjusted once the plan is adequate and a specific surety determination is made. Surety estimates have been established based on the following: 1. Structures and foundations 2. Infrastructure 3. Mine openings 4. General earthwork 5. Seeding 6. mobilization/demobilization 7. Supervision and construction (includes monitoring) 8. Escalation and other costs. (BE)

Once further details of the reclamation plan have been provided, it is possible the surety amount may change. (PBB)